

Individual Evaluation Form

Proposal Number: 07-CCSP_07-0001

Organization Name: LMD/IPSL

Principal Investigator: Emily Chien

Evaluation Summary

Solicitation Title: Earth Science Document Review
Solicitation Number: NNH07ZDA001R
Evaluation Status: Submitted (08/08/2007 @ 04:09:31 EDT by Richard Lawford)
Review: CCSP - WATER MANAGEMENT CHAPTER ONLY [CCSP WATER MGMT]
Reviewer: Richard Lawford (Reviewer)

Overall Grade:

Evaluation Criteria

Question 1 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

1. The charge was described to some extent in the report chapter but I did need to go back to the overall report introduction to see what was intended. It is very appropriate that the CCSP Prospectus on Decision Making includes a section on water. Water resource management is an obvious and critical area for the application of climate change products. Chapter 1 of the Prospectus states that "the goal is to provide useful information on climate change and research products". In some ways RiverWare may have been the best choice among recent developments to demonstrate this opportunity; however, the presentation of RiverWare focuses too much on the modeling system as a tool rather than demonstrating its linkages with climate information. The comments included here are intended to give this reviewer's ideas on how the above problem can be fixed.

Question 2 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

2. In my view the author has chosen to use an approach that says the glass is half empty to an approach that say the glass is half full. The analysis does not show all of the applications on RiverWare using climate data and Earth Observations so it is perhaps easier to reach that conclusion. For example, this reviewer was disappointed to see that one of the clearest applications of climatological and hydrological input to RiverWare was not referenced in the chapter. For a number of years, the NASA Goddard Space Flight Center and the Center for Research on Environment and Water together with colleagues at the Bureau of Reclamation, have been providing input to the Bureau's ET Toolbox that uses RiverWare to provide a service for those within the Bureau who make operational decisions. Details are available at <http://wmp.gsfc.nasa.gov>. It is not clear to me that this chapter is the work of more than one person.

Question 3 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

My major concern is that I think RiverWare has been sold a bit short in this chapter because it has been used more extensively as a means of communicating climate forecasts and information to the water sector than is suggested by this chapter. As noted above the chapter focuses on RiverWare rather than its climate applications. For that reason, one spends little time thinking about climate-related applications until after the author has dealt with the costs of the system, etc. It is not clear why costs of the software are introduced here, as it detracts from the focus of the report, which is climate information.

Question 4 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

Policy issues are not dealt with to any extent. However, the management structure of water in the USA will lead to policy issues whenever state and federal jurisdictional boundaries are impinged upon. Issues related to the licencing arrangements of RiverWare could also be an issue because programs like the Group on Earth Observations (GEO) are encouraging open source code and free access to environmental data (and to some extent the tools to use those data).

Question 5 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

3. It is assumed that the authors were given a very strict format for writing each section of their chapters. This structure may have helped to ensure completeness but in the case of this section it has lead to repetitiveness and a bit of "choppiness" in the presentation of information. It would be this reviewer's advice that the text be rewritten in a smooth, flowing way without the inclusion of questions, which gives the impression that he/she is reading a questionnaire that has been completed by the author. A reorganization and different emphasis also would allow the author to

present the information in a more logical way. For example, the first time this reviewer really got the message that RiverWare used streamflow inputs from independent sources was in the discussion of mid-range applications on page 97. Later on page 98 (lines 2219;2224), the author states that all applications use streamflow inputs. It would be desirable to reverse the order and let the reader know that RiverWare uses the streamflow generated by an application model as its inputs for most applications. In retrospect, the chapter would have been stronger and have better met the goals of this Prospectus if it had presented climate information and Earth Observations as input to a hydrologic model to produce outputs that then were input to RiverWare. This discussion would also be aided by the addition of an information flow figure for a climate application similar to those used in other chapters of the report.

Question 6 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

My concern about the chapter has been the omission of some important applications of RiverWare within the ET toolbox (Applications that have been reported in the water section of some of the CCSP annual reports). The absence of these applications makes the report more negative in terms of climate applications than is merited.

Question 7 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

No appendices other than the references were noted.

Question 8 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).

Not enough space to add them - however they are important and will be submitted as a separate set of sheets.